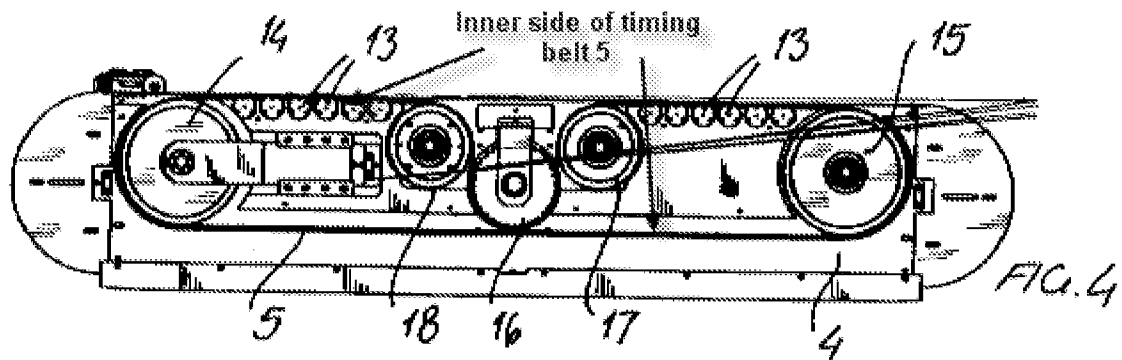


DETAILED ACTION

Response to Arguments

Applicant's arguments filed 11/25/09 have been fully considered but they are not persuasive. Regarding claim 1, Applicant argues that Luigi does not teach an inner side configured to engage a drive member. As shown in Figure 4 of Luigi, the timing belt 5 has the inner side (where 13 points to and was used as a reference point to look to and the inner side runs all along the conveyor to where the drive member engages the inner side) which is configured to engage the drive member 16 (shown below).



Applicant then argues that the teeth 12 of Luigi are not pliable, but Luigi teaches the timing belt 5 comprises a metal core, covered by reinforced plastic materials, and the teeth 12 thereof are outwardly directed C2 L17-20, which is known to one of ordinary skill in the art that plastic is a pliable material.

For the foregoing reasons, the claims stand rejected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4,6,8,10,12-16,18,19, and 21 are rejected under 35 U.S.C. 102(b) as being Luigi by 6,536,583.

Claim 1, Luigi teaches an inner side (side of 13) of 5 configured to engage a drive member 16 C2 L33; and an outer side including a plurality of teeth 12 that are configured to engage a corresponding portion of a step chain 2, the outer side teeth 12 each including a base (metal core C2 L16) and a pliable projection distal (edge of teeth of plastic material C2 L17)from the base Fig. 2.

Claim 2, Luigi teaches the-projections (edge of 12) are rounded Fig. 2.

Claim 3, Luigi teaches each of the teeth 12 includes a generally concave surface extending between the projection (edge of 12) and the base (metal core).

Claim 4, Luigi teaches the teeth 12 each have an engaging surface profile (to 3) that includes the projection (the edge), the engaging surface including a first concave portion having a first radius of curvature beginning adjacent the base (metal core), a second concave portion having a second radius of curvature adjacent the first portion and a third concave portion having a third radius of curvature extending between the second portion and the projection (Fig. 2) C2 L12-14 Fig. 3.

Claims 6 and 19, Luigi teaches the projection (edge of 12) has a first section with a first projection radius of curvature (on one side of tooth) adjacent the third portion (down

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section) and a second section (tooth adjacent) with a second projection radius (edge of 2nd tooth 12) of curvature extending between the first section and the distal end Fig. 2.

Claim 8, Luigi teaches the teeth 12 each include a relief near the projection that increases the compliance of the tooth 12 near the projection (the edge).

Claims 10 and 21, Luigi teaches a second plurality of teeth (side of 13 C2 L23-25 flat top trajectory) on the inner side and wherein the plurality of teeth 12 on the outer side have a first pitch that is different than a second pitch of the second plurality of teeth Fig. 1 (C2 10-15).

Claim 12, Luigi teaches the second pitch (flat top) is approximately one-half of the first pitch (having depth, approx. half) C2 L23;C2 L10-15.

Claim 13, Luigi teaches a step chain 2 having a plurality of links 3 each having a plurality of engaging members 11; a drive mechanism C2 L33; and a belt 5 having an inner side (side of 13) that cooperates with the drive mechanism and an outer side including a plurality of teeth 12 having engaging surfaces 11 that are at least partially concave portion of the teeth 12 elastically deforming (made from plastic) responsive to contact and that cooperate with the engaging members 11 on the step chain 2, wherein that movement of the drive mechanism causes movement of the belt 5 which causes movement of the step chain 2.

Claim 14, Luigi teaches the step chain 2 engaging members include teeth 11 having a convex surface that is at least partially received within the concave portion of the belt 5 teeth engaging surfaces Fig. 5.

Claim 15, Luigi teaches the belt teeth 12 each include a compressible projection (edge)

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near a distal end of the teeth 12.

Claim 16, Luigi teaches the teeth 12 engaging surfaces include a first portion having a first radius of curvature, a second portion having a second radius of curvature adjacent the first portion and a third portion having a third radius of curvature extending between the second portion and the projection (edge) Fig. 2 and Fig. 5 (engaging surface).

Claim 18, Luigi teaches the first, second and third portions establish the concave portion of the engaging surface and the projection (edge of 12) establishes a convex portion of the engaging surface into 11 Fig. 2 and 5 C2 L10-15.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luigi U.S. Patent 6,536,583 in view of Mol U.S. Patent No. 7,210,573.

Claim 9, Luigi teaches the teeth 12 made from plastic C2 L18-20, but Mol teaches a belt 100,150 comprise a urethane material (C3 L5-8). It would be obvious to one of ordinary skill to use a urethane belt as taught by Mol into the invention of Luigi since urethane is known to be stretchable and pliable and will conform to fit into the engaging surface.

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Claims 23,24,25, and 26, Luigi does not teach as Mol teaches a belt body comprising the urethane material and a projection near an end of the teeth 108 spaced from the body (C3 L5-8). It would have been obvious to one of ordinary skill to use urethane material for the belt with teeth as taught by Mol into the invention of Luigi in order to allow the belt to conform into the engaging surfaces.

Allowable Subject Matter

Claim 5,7, 11,17,20, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ms. Kavel P. Singh whose telephone number is (571) 272-2362. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KPS

/Gene Crawford/
Supervisory Patent Examiner, Art
Unit 3651